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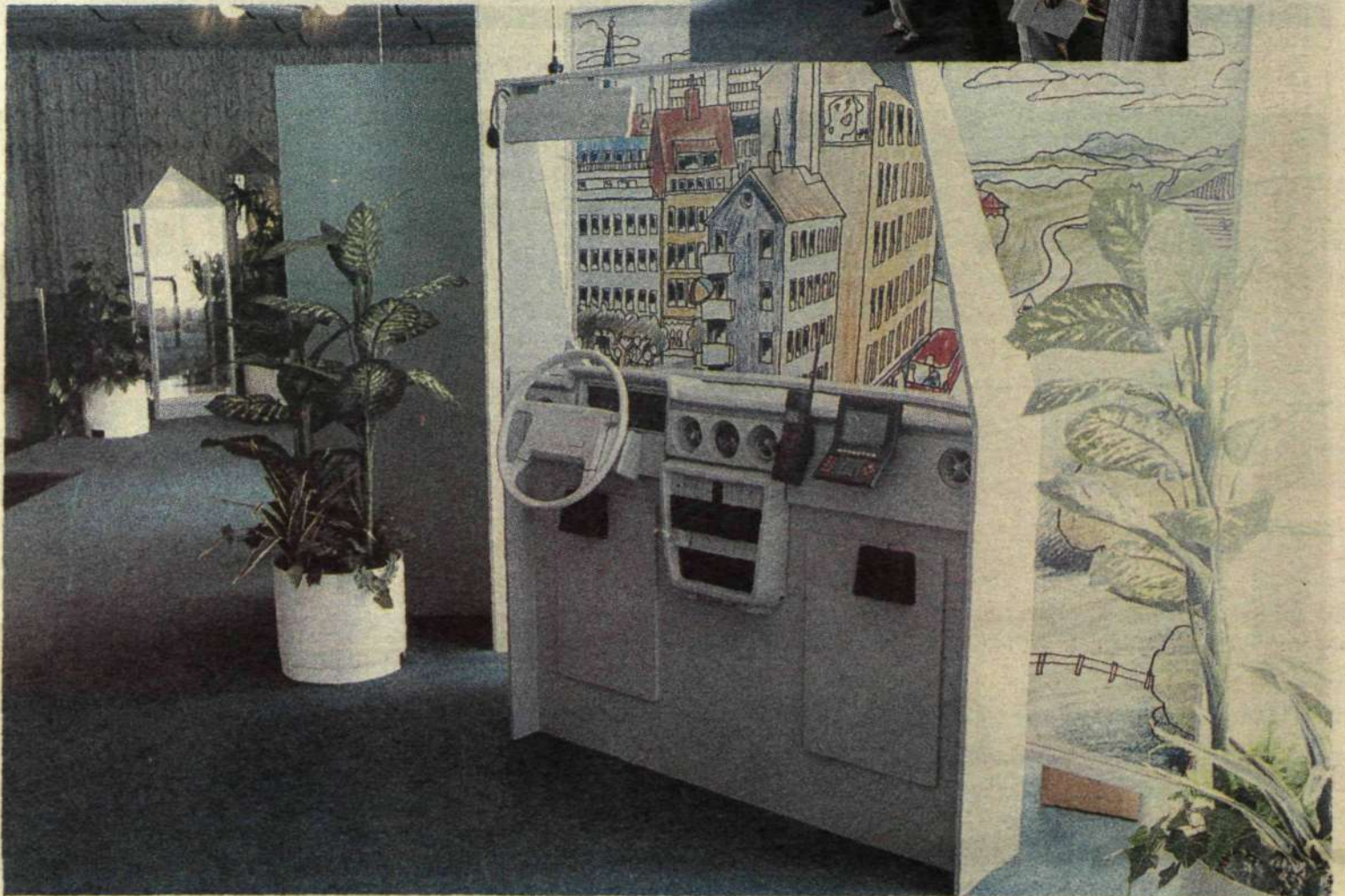
**The week the telecom
world centered on
Stockholm**

New Info Hall ready for ISS-90

After a few months of feverish building activity, the new information hall in the D building was ready, just in time for ISS-90. The new acquisition was a stylishly arranged exhibition of the latest Ericsson products.

During the technical visits to Ericsson Telecom, guests were treated to a premiere of the new Info Hall, a permanent exhibition of telephones, mobile phones, Mobitex, business switches, TMOS and much more. It is a lavish and well-arranged exhibition that now stood ready to meet the year's visitors. Here, one could see the latest in the field of telephony from ETM in Holland, the new cordless office phone DCT 900, the latest in mobile telephony and Mobitex, MD110 in several variations and, last but not least, a demonstration design for TMOS, Ericsson Telecom's major product of the future.

Outside the Info Hall, there was a container with an AXE switch that serviced the different installations in the hall. It will soon be replaced by a permanent switch in an adjoining room. Thanks to this, most of the products on exhibition are fully operational.



An instrument panel packed with the latest technology in mobile telephony: Mobitex and HoLine. Photo: Maria Petersson



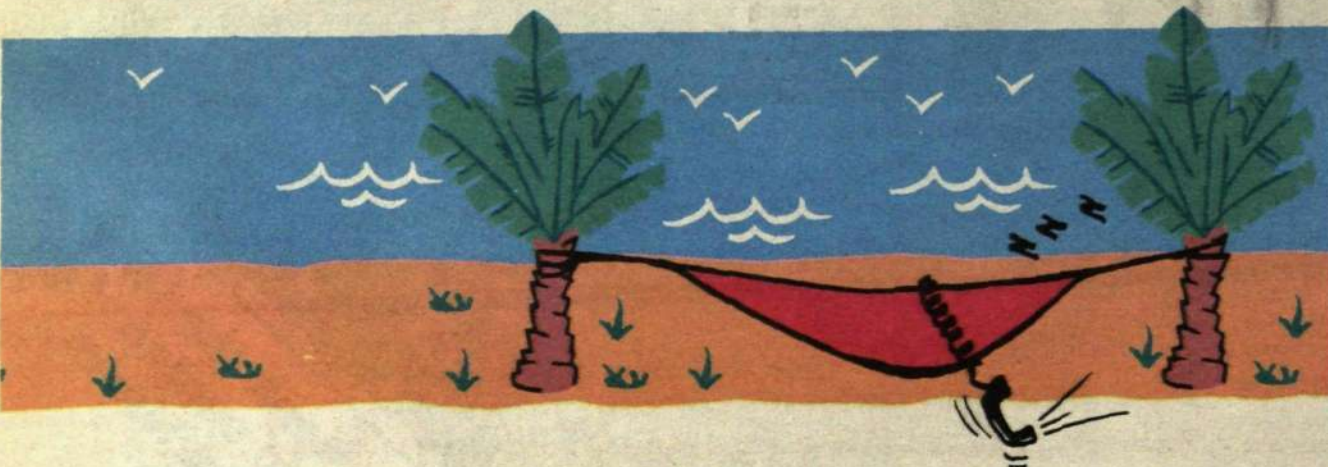
Red and exquisite. "Design" is the name of this Dialog model.



MD110 and several of the other exhibited products are hooked up so visitors could see them in action.



The exhibition was stylish. Here, for example, is a selection of ETM's new analog phones.



A wonderful summer to all our readers!

Contact in a special edition

As you will certainly have noticed, this issue of Contact differs from earlier issues during the year. As far as content is concerned, we have kept to one topic - the huge switching symposium ISS-90, which took place in Stockholm at the end of May. We have switched to offset printing this time since we would like to have the issue distributed before the summer vacations. Publication times have been a problem over the spring, and we promise to resolve this by the fall when the next issue of Contact comes out toward the end of August.

The Editor

World's telecom experts gather in Stockholm



His Royal Highness Prince Bertil opened ISS-90 with a characteristic and personal talk about his own experience with telephones, everything from the first set in the royal castle to the present day.

During the last week in May, Stockholm was invaded by telecommunication experts. It was the time of ISS-90, a week-long symposium on telecommunications technology. Behind the arrangements were Ericsson and the Swedish telecom administration, Televerket, which also took care of a major part of the 3,500 delegates from 86 countries that assembled at the Swedish Exhibition Center in Alvsjö.

ISS-90 was the thirteenth international telecommunications technology symposium since its start in 1957. ISS, which is now held at intervals of two and a half years, is the most technology oriented international gathering within the industry, different from a number of other exhibitions around the world that are of a more commercial nature.

ISS stands for International Switching Symposium. As the name implies, the symposium deals with telephone exchange technology. The contributions that were presented dealt with the partly new technologies that are

beginning to grow within the industry in order to meet the demands for new types of services in tele networks.

Broadband network and broadband switching were dealt with in a number of presentations. The coupling of broadband connections is needed for linking local data networks, so-called LAN (Local Area Networks) between different offices, for the transfer of high-speed data. In a longer-term view, broadband technology is also seen as a means of establishing video connections for, for instance, teleconferencing.

Several presentations discussed the technology for development of current networks vis-à-vis the new era networks, that is the desired development that already uses existing infrastructure in the form of tele networks, switches, etc. as a base for tele networks of the future.

Technologically, contributions dealt with so-called ATM switching (Asynchronous Transfer Mode) and also with optic switching.

Market determines

Even though the symposium had a clear technology orientation,

today it is unquestionable that technology to a great extent reflects market trends. It is no longer a question of discussing technology that seeks an application; rather, now it is a question of market need that requires technology.

Standard needed

During the closing sessions, a group of international experts presented a summing up of the symposium and their conclusions about the most important results. Two aspects stood out as overriding: The quest for a new method to handle programming to increase productivity and quality and, underscored by the assembled experts, the importance of establishing international standards for tele networks and the ongoing quest for collaboration within the telecommunications industry to make the standardization process effective.

As a final gesture, the chairman of the conference, Torsten Larsson, passed on the mantle from ISS-90 to ISS-92. The symposium will be held in October 1992 in Yokohama, Japan.

Text: John Meurling
Photo: Kurt Johansson

A cold buffet with a warm mood

Expectations hung like a dense fog over Stockholm's City Hall on Monday evening. All the delegates wondered what the ISS-90 week would be like for them. It showed in their faces. New technology, but also new contacts to be made.

The weather, very important considering all the outdoor arrangements during the week, was merciful but not excessive. Those who hoped for rain – and they could not have been many – were disappointed. But warm it was not. Stockholm in May, in pleasant moments, can lure us into thinking that we are living in southern latitudes. But that was not the case this evening.

Blue with cold, in their light undergarments, the delegates milled around looking at each other. Unfortunately, a lot of them had been informed that the reception would be held indoors.

But it was only the beginning of ISS-90, and for the promoters it was the first time that the weight of the arrangements was really felt. So many people gathered in one place.

The City of Stockholm invited the guests for a buffet under a yellow and whitestriped tent on the pier of the City Hall. The outcome was total, which meant that not everyone could really have his fill. A disappointment indeed, but in the course of the week it was evident that there would be innumerable occasions to make up for



As the last rays of the sun continued to shed warmth, delegates milled about in the courtyard of Stockholm's City Hall. The City held the reception.

it. So the disappointment easily disappeared later.

There were many happy faces again that night. People who work in different countries, or who participated in the seminars, met their old colleagues again. It seemed like everyone in the telecommunications field had assembled in the space of some 10 square meters. Impressive indeed!

It was a promising, though chilly, introduction to the ISS-90 week.

Text: Helena Lidén
Photo: Kurt Johansson



The wall down at the water was a perfect place to steady the wobbling trays. It's not easy to hold a paper plate in one hand while trying to cut a meatball with the other.



Some people were lucky to find a sunny spot to keep warm while chatting with colleagues and friends.

On the electronic highway of the future

"A flood of new ideas and new possibilities give us all reason to be optimistic about telecommunications of the future," says the director general of the EC Commission, Michael Carpentier, at ISS-90. Telecommunication and information technology complement each other and a number of cross-fertilizations will become part of the future.

One of the most heated topics of the ISS-90 symposium was the development of B-ISDN, Broadband-Integrated Services Digital Network. With the new technology in progress, opto technology, a future is being built with a single network that can handle several services simultaneously, voice, text, data and video. In our homes, we will be able to enjoy all these services through one and the same outlet.

An integrated broadband network, based on high-capacity opto fiber, will make this possible. Information and telecommunication technology will be merged in the same network.

Infrastructure

A world race is now going on to see who will be the first and best in the development of B-ISDN. It is this development that will give the world a new infrastructure. Today, we have a jungle of complex networks, but what we want to have is a fully developed broadband communication electronic highway, which will dramatically create communications possibilities and bring the world closer to us.

On the EC side, they are aiming for development to have a digital network for data communications and telephony for development in Europe. When the EC internal market becomes a reality in 1992, a common reciprocally approved European standard for telecom-

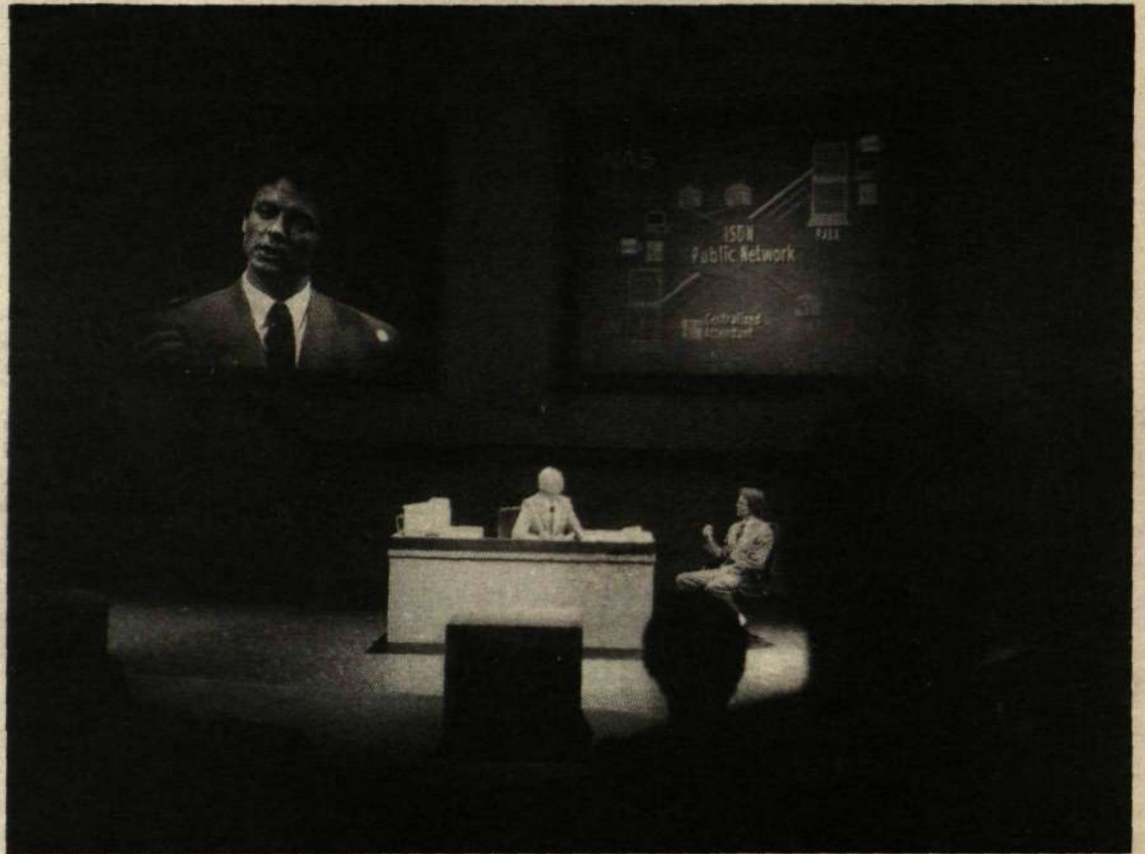
The new opto technology paves the way for new society

munications, European Telecommunications Standard, will apply. RACE, Research and Development in Advanced Communication in Europe, is responsible for the expansion race in Europe.

A brake on the development has been and still is the plethora of national standards that exists in Western Europe.

"Standard is more important than anything else," as Michael Carpentier, director general of the EC Commission put it during a plenary session of ISS. The overflow and variations of everything progressive in technologies make it necessary to tighten up the rules of the game. We need an intelligent harmonization and standardization in order to avoid a total cacophony and to rescue the user from a nervous breakdown.

During an ISS technical visit, Ellementel, Ericsson and Televerket development companies staged a display of broadband know-how that was jointly developed by Ericsson and Televerket. We



Bengt Feldreich, well-known to the international public, interviewed technicians with the help of video and wide screen.

showed a service network, International Switched 2 Mbit/s Service, achieved together with Denmark, Sweden, Finland and Switzerland and we took part in a video conference with Finland and Switzerland via wide-screen TV.

World at home

We had a dizzying vision in the room of the future, a home/office milieu packed with electronic services. We saw a future where you can order your favorite music from private distribution companies directly to your home through hi-fi audio, highquality sound.

You could order your favorite video home on a high-definition screen in giant-size format, where you could also hold video conferences.

You select your food, your clothes by going through the shop with the help of a screen, zooming in and examining. Through high-speed data communication, you can communicate with a world beyond borders. The world that is opening for us through opto technology.

**Text: Inger Bengtsson
Photo: Thord Andersson**



Televerket had moved an exhibition from Farsta to Frescati.

Under the bridges of Stockholm

Stockholm is not called the Venice of the North for nothing, with all that water. And that's why many took the chance to make a sightseeing tour by boat under the bridges of Stockholm.

Certainly not only delegates came to Stockholm to participate in ISS-90. They also had the opportunity, at a reduced price, to take one or several others along with them, so-called accompanying persons.

For them, ISS-90 organized an entire program during the week, so that while the delegates sat in dim rooms at the Alvsjömassan exhibition center, they could see as much of Stockholm as possible. An arrangement that was truly

appreciated.

Already on Monday afternoon, the tours began with a visit to Drottningholm Castle.

Tuesday morning, there was a bus tour around Stockholm, with visits, among other places, to the Royal Castle and the Old Town (Gamla Stan), as well as an afternoon boat trip

Wednesday's tour was an all-day excursion to Gripsholm Castle, Uppsala and Sigtuna, and on Thursday there was the opportunity to visit various art museums in Stockholm.

Delegates also

We accompanied the Tuesday afternoon excursion under the bridges. Everybody assembled at the pier outside of the Grand Hotel and it was soon evident that this



The sightseeing tour was centered around accompanying persons, but many delegates also took time off from the symposium at Alvsjö to go along.

was a tour that appealed not only to accompanying persons but also to many delegates.

Equipped with cameras, loads

of film and their windbreakers, several hundred people swarmed the Stockholm Sightseeing boats, grouped according to the language

they spoke.

The crowds headed straight for the back of the boat. A brilliant sun was inviting to see Stockholm while sitting on the deck.

The cameras clicked away. Stockholm has much to offer. Seen from a boat, Stockholm is quite different from what one is accustomed to seeing. New places crop up all the time, and at times it is difficult to know where you really are, even if you know Stockholm quite well.

Considering the meanderings that the boats made, through all the islands, under the bridges and through the smaller canals, it was not surprising that many were a little dizzy from following the maps all the time. At last they felt on familiar ground when the boat, after a two-hour trip, passed through yet another lock and headed for the pier down at the Grand Hotel.

**Text: Helena Lidén
Photo: Maria Petersson**

Lars Ramqvist meets the world press

"We could expand much more in Stockholm if the local politicians had not put an end to expansion. **"The 30 percent investment tax makes it impossible for us,"** says Lars Ramqvist, president of Ericsson, at a press conference at the end of ISS-90. The company's biggest future investments are in, among others, mobile technology and broadband switching.

At Star Hotel in Alvsjö, in the winding down hours of a dazzling ISS-90, Lars Ramqvist, president of Ericsson, held a press conference for the world press. He had come there in order to field questions about Ericsson "in general terms." But it ended up being more than that — an open discourse on Ericsson in Sweden and Ericsson in the world.

"Today we sell for more than 200 million kronor per day, and in the daily press there is constant coverage of Ericsson. The market situation is stable. We are going full speed ahead and our profits are expected to grow by some 25% during 1990," Lars Ramqvist pointed out.

Investments in the telecommunications market have had bigger positive results than forecast for the company. The platform, based on Ericsson's classic know-

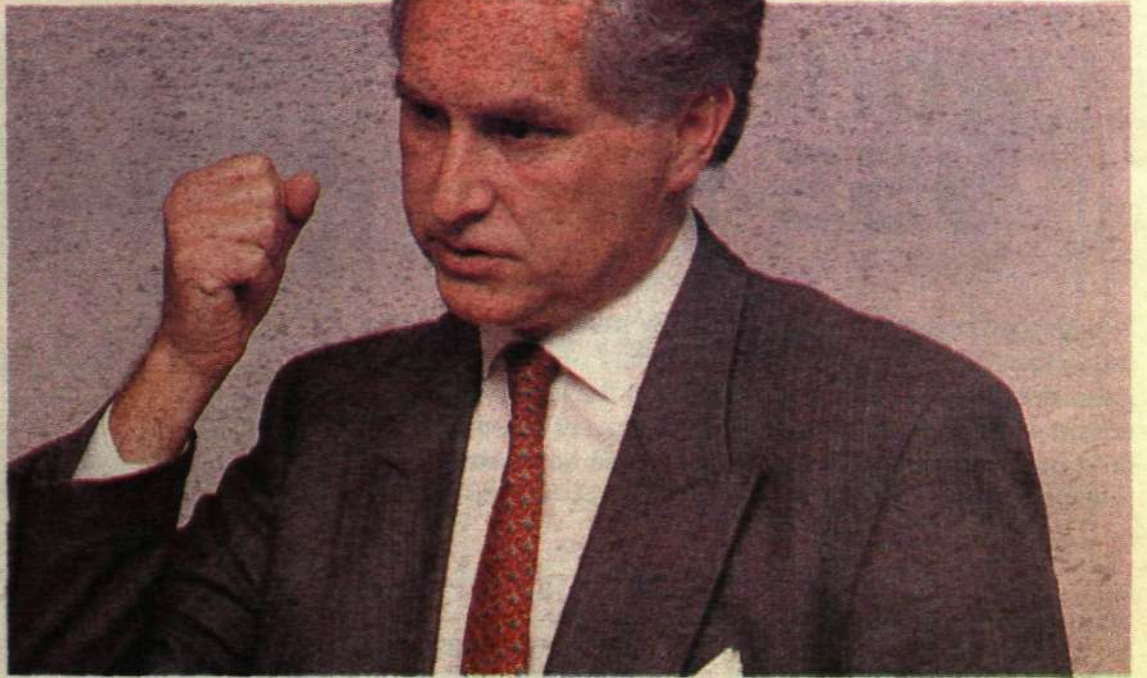
"We must be able to grow even more"

ledge of the public markets, public telephone systems, switching systems for private markets in combination with mobile telephony — "the core business concept" — gets stronger every day. With this background, Lars Ramqvist set the stage for questions.

What will be of most importance for Ericsson in the '90s? It will be building systems and an interest in what is going on in Europe, the United States and Asia, including Australia. On the question of which of these markets are really dream markets, Lars Ramqvist replied that Ericsson does not put any one market ahead of another. The dream is to be present in all of them.

Ericsson took a step into East Europe earlier this year and was the first to sign an order in Budapest. Mannesmann was a breakthrough on the German mobile telephone market. Does this mean that there is an opening for telecommunications in West Germany?

"It is extremely important that we continue our inroads into the German market and I can only hope and trust that we will be part of the German telecom market. There is nothing of that yet in the order books, but there are strong



"Throughout the '90s Europe will continue to be our biggest market," says Lars Ramqvist.

indications from people that are very optimistic about the situation".

R&D

Among world telecommunications suppliers, including AT&T, there is a tendency to reduce allocations for research and development, R&D. What is Ericsson planning to do?

"We have no intentions of reducing our R&D costs. On the contrary, we are investing even more. Today, we have 10,000 people working on R&D."

Ericsson has ten research centers for radio systems: one in Montreal, one in Mexico City, one in Ireland, one in Helsinki and they all follow the same rules, with overall control from Stockholm. There is still a need for more people in R&D in Stockholm.

"We have tried to set up a research center in Kista," says Ramqvist, but the local politicians have put a stop to that. The 30 percent investment tax makes it impossible for us to build in Stockholm, where we could expand much more. The alternative is to build in Richardson, Toronto or Mexico City."

When the question came up of where Ericsson's headquarters would be in the future, Ramqvist replied that he could not guarantee what the future would bring. The head office should be where the business is, he said, but as of today there are no such plans. "We can't just say goodbye; we were born here. But I do not say that we will sit here forever. We must be flexible."

But Ericsson is and will always be Swedish. Its stock and its shareholders will, in the main,

continue to be Swedish, even if a quarter of its shares are foreign owned.

For the future, the company is investing in mobility and broadband technology.

What is Ericsson doing to assure that its excellent developments would continue?

To that Lars Ramqvist answers that he does not wish to leave the press conference with an exaggerated optimistic picture of the future. On the contrary, he is concerned about rapid growth, which demands extreme caution and awareness. It has to do with growing too fast. Threats from the politicians do not make it easy for expansion, which in itself is a bigger threat than the present state of the electronics industry, with a shortage of components and competent personnel.

Inger Bengtsson



It was interesting to follow the course by map, and many did so. Still, it was difficult to keep up with all the islands.



From a little tourist boat, the ferries to Finland seem huge. A cruise ship was also in port as the sightseeing boat went by on its way to Hammarby harbor.



Several hundred people gathered down at the pier outside of the Grand Hotel to take the sightseeing tour under the bridges of Stockholm.

With her map in a firm grip, this elegant lady marvels at the bridges, houses and locks in Stockholm during the two-hour long trip.



What was that now? Heads turn in every possible direction. There was so much to see and the guides diligently narrated history and anecdotes.



Many at work with ISS-90

It began on a small scale but became more and more important as ISS-90 approached. Many of the delegates that visited ISS were significant for Ericsson, and in some way we wanted to take care of them and do something extra. Some 120 hosts and hostesses worked with the most shifting situations over the week.

The job of the hosts and hostesses began already on the Friday before ISS-90 week at Arlanda airport. Ericsson had its own welcome desk there and received delegates as they arrived.

"We began at a quarter past five in the morning and the desk was manned during the entire weekend," says Monica Nyström, in charge of the hosts and hostesses.

"We also had hosts and hostesses at several of the hotels where delegates were staying," she adds. "It was hectic."



"The hosts and hostesses did a phenomenal job," says a very pleased Monica Nyström, who was in charge.

To a great extent, the job consisted of practical matters, such as seeing that the delegates were on the bus for the various evening events, arranging meetings between the various delegates, booking tickets, and many other things.

The hosts and hostesses were also there for the technical visits on Wednesday.

Trained

"Those doing the job received special training, and in addition they all saw films of Ericsson from the training division as well as information about different cultures. They also all had to learn how to use mobile phones."

The problem the week before was to disseminate information about what would be going on during the following week.

"We wanted very much to inform our hosts and hostesses about exactly what they should be doing. At the same time, we did not know what could eventually occur. It wasn't so easy."

Many things were done at the last minute, and the hosts and hostesses had to work very independently and make quick decisions.



Ericsson's welcome desk at Arlanda was well frequented. Hosts and hostesses even arranged buses for the bigger hotels, which was immensely appreciated. Photo: TONI HOLPERS

"They really did a phenomenal job," says a very satisfied Monica. "We heard nothing but superlatives from the delegates. They got a very professional impression of Ericsson and Sweden."

Even the competitors spoke of how impressed they were. Both Monica Nyström and Arne Johnson from Ericsson's ISS organizing committee are toying with the idea of continuing to use the hosts and hostesses from ISS.

"If we continuously keep the group informed and trained, it should be simple to use them in similar contexts later," says Arne. "That would save a lot of time and work."

Text: Helena Lidén
Photo: Maria Petersson



Hosts and hostesses saw to it that the delegates were on the right buses for the evening events.

Taking care of the press

When it comes to a fair, there are always journalists. For ISS-90 there were some 50 of them.

To take care of the press, among other things, a PR group was formed, consisting of Lena Hyttsten and Hampe Mobärg from Ericsson Telecom, Gustaf Lagerberg from Ericsson Business Communications and Lars Jonsteg, Ericsson Radio Systems.

It is important to disseminate information; that applies just as well to announcements that give the company press coverage.

But taking care of journalists means above all giving them the service and information they need. In this way, we establish a trust that benefits everyone. For Hampe Mobärg, work on information about ISS-90 began early. Together with Arne Johnson he began

working on information already in September of 1987. That had to do with informing and recruiting people internally also.

The externally oriented PR group began its work about three months before ISS-90 started.

"We wanted journalists to have access to very much material during ISS-90, releases, articles and pictures," says Hampe. "They could choose and reject."

At the Royal Star Hotel, at the fairgrounds in Älvsjö, a VIP and pressroom was set up, which was manned all week. There, journalists could obtain information, as well as telephones, computers and fax machines.

Several activities were organized during the week, especially for journalists.

"We had a boat trip with dinner for the press on Monday evening," says Hampe, "and on Tuesday

morning we set up a very much appreciated press conference with Ericsson's President and Chief Executive Officer, Lars Ramqvist. On Tuesday afternoon and on Wednesday special technical visits were arranged for journalists. They were able to take part in a broadband ISDN show and a visit to Ericsson Radio Systems in Kista.

Ericsson's press group was also the "general fixer" for the journalists. Among other things, they organized more informal meetings with experts within Ericsson.

"The purpose behind investing time and money to inform and serve journalists," says Hampe, "is naturally because in their turn they reach such a lot more people. People who perhaps could be our prospective customers."

Helena Lidén



It is important to provide journalists with information. Here, the English journalist Neil Parker from International Telecommunications Intelligence chats with Lena Hyttsten. Photo: THORD ANDERSSON.

High spirits and spirits at Skansen

There were food stalls at every turn in Skansen this Thursday evening. Bewildered strolling Stockholmers asked somewhat provisionally what was it all about with those people going around in white windbreakers. The cross current left the penguins cold, which was actually quite appropriate.

Thursday evening during ISS-90 was warm and beautiful. Just imagine how lucky they were, Alcatel. What would they have done if it had rained. As it turned out, this Thursday was the warmest evening of the entire week.

There is an explanation for the jackets. As soon as all the delegates came up the steps to Skansen they were given a windbreaker. It could get cold later in the evening. At the same time it was a sure way of knowing who belonged to ISS-90 and who did not.

As it turned out, 90 percent of the visitors to Skansen that day had white windbreakers. No wonder the other ten percent wondered why.

Food, food, food

At the Solliden stage, salmon and wine was served beneath a yellow and white striped tent, accompanied by fountain music.

This evening there were no restrictions at all, no right or wrong road to take, and no time deadlines at every place.

Many strolled around and took advantage of the beautiful views. Naturally, the animals were also a source of attraction, even though many of them had already retired for the day.

The scene at the food stall in a Lapp tent was somewhat macabre. On one side of the grounds a reindeer stood and munched, while on the other side we stood and munched reindeer meat. But that did not bother the delegates. Perhaps, they did not think of it in that context.

The huge buffet was served at Högloftet, and here the queue was long and seats were few. If the food should not be enough, there was also herring on crisp bread,



The evening at Skansen ended with a wonderful firework display, with the center of Stockholm in the background.



When Alcatel arranged for Thursday evening at Skansen, everyone got a white windbreaker. Good to have when it got chilly.

coffee with cake and ice cream.

The big band stayed later during the evening at the Solliden stage. The draft, or what came to be known as "The Royal Cross-draft," lent itself to a very jolly time, as well it should, and a lot of

music to go with it.

Against a darkening sky over a beautiful Stockholm, an exciting firework display brought a fitting end to the evening.

Text: Helena Lidén

Photo: Maria Petersson



Music was heard all around Skansen. Many stayed back to look at the clavicle players.



After walking around a lot, it was nice to rest one's legs and look at the views.

Network – buzzword for ISS-90?

Network means net construction and can include several different things. The word has been used frequently during ISS-90, and although Ericsson's Business Area Cable and Network (BN) was sparsely represented during the conference, its spirit was present in much of what took place. Without functioning network technology, telecommunications will not function.



The future will make bigger demands on networks, says Jahn Wennerholm.

Jahn Wennerholm works with strategic planning, among other things, within Business Area BN and has followed ISS-90. What impressions did he get?

The most important lessons we can draw from ISS-90 is that switching technology of the future will make heavy demands on networks. One cannot avail of the services switching can offer, and which the market also demands, if one does not have a functioning network to relay these services to customers in a cost effective manner.

Jahn Wennerholm also assesses ISS-90 and feels that the networks we shall be building for the future can easily be complemented to be multiple-service where telephony, computer traffic, video conferencing, cable TV, etc. can be relayed over the same network instead of over several separate ones.

"It is interesting to note that many huge resources are laid out in the development of new switching systems, while relatively small resources are laid out in the development of the network itself between exchange and subscriber. I feel that here we are going to see huge overall changes.

Endless market

The tele network of the future must be flexible and be able to handle all the different services that new switching technology can offer. They must be efficient in operation and in maintenance. Telecommunications administrations the world over are now involved in new investments, often in competition with private interests. Here Ericsson encounters an almost endless market – we can sell our knowhow and our products to telecom administrations as well as companies and institutions.

BN has many irons in the fire. We are participating, for example, in Televerket's expansion of the digital fiber optic network. The Italian Sielte, BN's largest company with more than 4,000 employees, is involved both in the construction of long-distance networks and local access networks. Together with BX, BN undertook a turnkey project in Oman.

For some years now, BN has also been working with British Telecom in Britain. BN has huge

network projects in Turkey and it was newly established in Spain both in the area of cable manufacture and network construction.

A few months ago, BN started a network construction company in Mexico – BN has been a major cable manufacturer in Latin America for some time now. Southeast Asia has been in mind for several years as an area for network construction.

"We have fantastic expansion in the telecommunications area ahead of us in the '90s. We reckon the number of telephone lines in the world will double between 1990 and the year 2000," says Jahn Wennerholm.

Several countries in Southeast Asia have made big investments in efficient telecommunications in recent years. The demands in the business world are immense – to build up a strong economy one has to have functioning telecommunications with well-planned networks. One of the most vivid examples of a fortunate development in this way in that part of the world is Singapore, which, through investments in modern telecom technology, made a brilliant upswing in its economy. It is also from here in Singapore that BN directs its ongoing network construction projects in Thailand, Malaysia, the Philippines and now lately also in Mauritius, in the Indian Ocean.

Cooperation

Through efficient cooperation between the various business areas, growth can be even greater. When Cable and Network (BN) manufactures cable and builds networks, Ericsson Telecom (BX) provides switches and other switching technology. When BN builds local digital networks Ericsson Radio (BR) can come in with the "missing" link in the chain – the latest in cordless communication for subscribers.

In this way, we put our collective knowhow at our customers' disposal and use our resources most effectively. With combined knowledge and common effort we can offer our customers cost effective total solutions, where each and everyone in Ericsson does what he does best. Cooperation beyond the boundaries of business areas is the A to Z of continued success.

Thord Andersson

A resounding success at the Globe

A 16th-century feast with crystal chandeliers, Christmas tree party with paper streamers and balloons. Yes, the ideas were many and more or less fantastic for "A Memorable Evening at the Globe." But Arne Johnson and others involved settled in the end for Vikings as the ongoing theme.

The evening was truly memorable. And Arne Johnson recounted that he got a lot of positive feedback from people both inside and outside of Ericsson. Obviously, the evening was a resounding success.

Some 2,700 persons were welcomed Wednesday evening with champagne and grilled fare, before it was time for the performance.

Inside the Globe, half the arena was blocked off with large covers, and from galleries along one side the delegates were able to take a journey in time, conducted by Hans Josefsson.

Brief music themes took the public back to the time of the Vikings, and Hans pointed out that the Vikings were indeed masters in communications, considering their plunderings around all of Europe: "They established the first version of the EC."

Friendly chat

Long after the Viking era, Tony Hagström, the managing director of Televerket, the Swedish telecommunications administration, and Ericsson's president Lars Ramqvist, took the podium. They spoke with Bengt Feldreich about telecommunications in a relaxed and humorous manner.

Among other things, they explained why Sweden has always been so far ahead in telecommunications.

"There are many theories about that," Hagström noted. "One is certain. Swedes have always been crazy about phones. That has definitely played a major role."

Lars Ramqvist felt that the success of the Swedes in telecommunications is attributable to the fact that Televerket has been so successful here at home in Sweden that Ericsson was obliged to go out into the world. It has not really had a home market.

Bengt Feldreich pointed out that Televerket and Ericsson have not always seen eye to eye and the discussion ended with Tony Hagström and Lars Ramqvist very symbolically sharing the tab for the Globe evening, without discussion.

Huge restaurant

A big surprise now awaited all the guests. The covers were removed and the Viking realm was revealed. Tables set for 2,700 people were on the ground floor.

Already, at the entrance all the guests had received medals and various symbols. Now, they were given the explanation for them.

Four areas were built up under huge banners with corresponding designs: a Viking ship, a Viking hunting scene, Viking dwelling and Thor's hammer. It was a

Delegates were welcomed with champagne, suspended Viking ships and shows

simple but effective seating arrangement that worked remarkably.

A formidable and fitting welcome speech set off the dinner.

Pekka Tarjanne, secretary general of the International Telecommunications Union, succeeded in describing the purpose of the International Switching Symposium in words that began precisely with I, S, S. During the dinner, guests were invited to proceed to a stage erected in the four enclosures. The group 8 RÖSTER (8 VOICES) performed, along with Åsa Jinder, Monica Svensson, Mats Bergström, Diana Nunez, Hector Bingert and Finn Sjöberg.

Chefs from the ceiling

One of the really big surprises of the evening - and there were many - came shortly after the hors d'oeuvres.

Two large Viking ships descended slowly from the ceiling. Standing in the midst of them, chefs prepared grilled lamb. For real too. They were up there all evening without being noticed.

The evening ended with a show by Lill Lindfors, much appreciated by the Swedes and the foreign guests.

The warm red lights and the candlelight at the table, along with the informal atmosphere, contributed a lot to the evening being as relaxed as it was. There was no question of sitting stiffly in one's seat, there was every opportunity to move around freely in the setting.

At the same time there was always something going on somewhere. There was no reason to be bored.

Comments from delegates later in the week revealed that the evening was a resounding success. Expressions like professional, well organized and very very pleasant streamed out endlessly. Many felt that this evening was the jewel of all the week's events.

**Text: Helena Lidén
Photo: Maria Petersson and Anders Anjou**



The group 8 RÖSTER (8 VOICES) performed during the evening, along with Åsa Jinder, Hector Bingert and many others. The master of ceremonies was Hans Josefsson.



Pekka Tarjanne, secretary general of the International Telecommunications Union, gave a formidable welcome speech.



It was no fabricated story. The chefs actually prepared the food on the Viking ships.



Hosts and hostesses met guests at the entrance and distributed medals to all of them.



Food from heaven! Chefs prepared grilled lamb on two Viking boats as they descended slowly from the ceiling.



The evening ended with a Lill Lindfors show. Even though she sang in Swedish, her performance was very much appreciated.



The guests are served and during the dinner they could enjoy performances on the four stages located in each corner of the arena.



Okay, we'll split it evenly, agreed Tony Hagström of Televerket and Lars Ramqvist of Ericsson, when Bengt Feldreich asked them to settle the bill for the evening at the Globe.



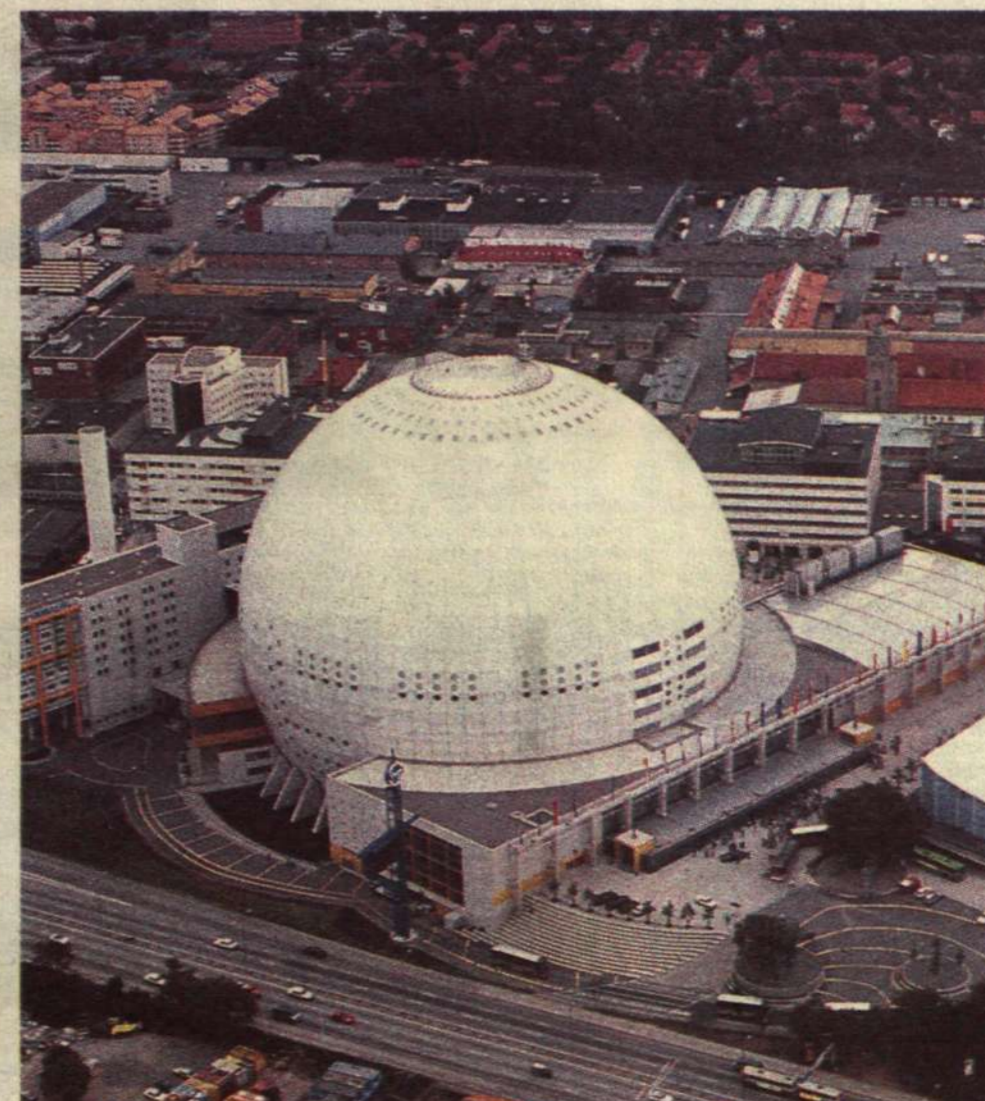
2,700 dinner guests at the Globe is an impressive sight.



Ericsson Telecom's president, Jan Stenberg, at one of the two tables of honor.



After his talk with Tony Hagström, Lars Ramqvist was able to leave the limelight and enjoy his dinner leisurely.



The Globe accommodated close to 3,000 people who were able to enjoy good food and pleasant performances, and not least a lot of surprises.



Arne Johnson pulled it off! Among other things, he pulled the strings for the Globe evening and won nothing but praise for the event.

Year's work for a fête

For Arne Johnson, time spent on ISS-90 was tough and demanding. Already, in March last year, his job began.

The most important task during the ISS-90 week was the technical visits. But the Globe was something else special.

"We had several consultants involved who would come up with ideas, but it was not until quite late that we latched on to the Viking theme, he recalls. Then came the Globe Arena and, among others, Peter Ström, management consultant and author, into the picture."

"I have certainly seen some 20 to 30 different events in the Globe since it was inaugurated," says Arne, weighing the possibilities of what it had to offer.

Collaboration with the Globe went very smoothly all the time. For them, this huge event offered a chance for others to see what the Globe could do.

"During the job, there were many discussions about every detail. We wanted to meet the expectations of the evening. That's why we tried to keep everything as secret as possible. But at the same time we were also expected to meet all the expectations that were cropping up."

Everybody got in

"Thank heavens, everyone who was waiting outside, who did not have a ticket, was finally able to get in," says Arne. "But many had certainly not thought of going to the Globe since they knew that it was already fully booked. Failure to register and incomplete application forms also played their part. It was a hassle."

Arne Johnson can be pleased with his job. All the reactions were positive and the evening provided a lot of good will for Ericsson.

"It was really tough work, but all went well," says Arne, with a smile.

"But without my fellow workers and mobile phones it could never have happened," he affirms, before leaving for a well-earned vacation.



Wolter Lemstra, AT&T, the Netherlands, made his first GSM call from the demonstration bus. Besides technical information about GSM and the opportunity for testing the reception quality by making the calls themselves, delegates on the bus trip also got an interesting tour of Kista.

On display

GSM is the designation for the future pan-European digital mobile telephone system. The common system that will make it possible for a person to go through Europe using the same mobile phone regardless of which country he happens to be in. (And some time later all that will be needed is a so-called smart card that can be inserted in a phone that one leases on the spot).

Up to now, Ericsson has been chosen as supplier for nine countries, among them major countries like Britain, France and, just recently, West Germany.

Mobitex is a system for mobile data communications for national and regional networks. It is optimized for data and text communication but is also equipped for voice. Typical users are transportation companies, rescue services, the police, taxis and service companies. At present, Mobitex is found in Sweden, Finland, Norway, Canada and the U.S., as well as Britain where it will come into use in 1991.

DCT 900 is the cordless office phone that functions in a three-dimensional office setting. Ericsson will begin testing after summer it will begin sales next year. Production will begin in the autumn in the newly built factory in Holland, which will be inaugurated in September by the Swedish king. He will also make the first call on the system.



Anneli Marttinen, secretary with ERA and hostess at the technical visits, shows delegates to the bus that demonstrated Mobitex during a short trip.



More than 330 delegates from 35 countries got a chance to listen to and actually try mobile communications.

The

With the technical visit to Kista, delegates could experience mobile telecommunication through GSM calls, see how Mobitex works and try out the cordless office phone, DCT 900.

The technical visit to Ericsson in Kista was clearly a success, with more than 330 delegates from 35 countries. Among the different events that participants in ISS-90 could choose from, there was the technical visit, which was fully signed up for.

"The delegates came in two groups, one in the morning and the other in the afternoon. And everything just went perfect," says Lars Jonsteg, head of information at Ericsson Radio Systems and the man responsible for the visit to Kista. Some 50 employees were involved in making the arrangements, which began in the fall of last year.

Besides the ISS-90 delegates, Ericsson employees were also present for demonstrations in Kista, either for rehearsals the day before or the day after when everything was repeated. In all, there were 850 visitors over a period of three days.

GSM

For the first time, Ericsson employees and others had a chance to test voice quality on the future pan-European digital mobile telephone system, GSM. The system that in a few years would transcend borders as far as mobile communications in Europe is concerned.

"The system functioned fault-free," recounts an obviously satisfied project leader Stefan Källander. "We have been working with the demo system since February. It is built on a test system that we ran earlier in Årstadal, but now it was a matter of getting a telephone hook-up of the system so that one could call from it."

Stefan admits that the project was not entirely problem-free, that it took a lot of blood, sweat and merry laughter. And overtime.

The demo setup consisted of two separate small systems, each with a base station and a mobile station. The mobile stations were in specially built buses that drove around a bit through Kista. The base stations covered the Kista area pretty well, actually as far as up to Upplands Väsby.

Visitors could both call out on the general network (for example, one called his wife in the Western U.S.A., whom he awakened in the middle of the night, which made for very short call) and listen to a taped recording (from the test site in Årstadal) where one could follow the variations of the field reception on an adjacent screen. A technical invention of ERISOFT, Skellefteå, which did the bulk of the project work.

Stefan reckons that some 25 persons worked with the system.

future speaks here



Raul Estrada from Mexico called home on the DCT 900, the cordless office phone.



Mobitex was shown in different phases. Per Ocklind, ERA, spoke about terminals.

was shown in different stages with information about the system itself, terminals and different application possibilities.

A five-minute bus tour in Kista was also included in the demonstration. In this way delegates could see how Mobitex functions in its actual milieu.

"We had hooked up the bus with a taxi in Västerås that uses Mobitex. The bus played the part of a taxicab and so "the cab's occupants" could see on its computer screen how the system works," says Marianne.

Office phones

The third product was the cordless office phone DCT 900, which was shown to the public for the first time.

A small system with two base stations in Electrum, connected

to a switch and out into the public network, made it easy for delegates to call all over the world.

The office phone attracted a lot of interest and many were surprised that Ericsson had come so far with it and that the terminal itself was so small.

"A group from Poland and the Soviet Union was fascinated by the possibilities that the cordless phone offered," says Lennart Nilsson, president of the Swedish Nira company.

The cordless office phone is really a product of the future and, not least, Swedish companies have expressed a keen interest in this type of system.

"This is what we are waiting for," they say.

Lars Cederquist
Gunilla Tamm



The team behind the GSM test system: From left, Stefan Källander, ERA, Nils Lindberg, Peter Lindström and Bo Lindfors, all three from ERISOFT, Leif Bertholdson, ERA, and Rolf Olofsson, ERISOFT.

Pictures from ISS-90



ISS-90 was the pocket phone symposium. It was all the rage when the world's telecom experts gathered.

Above: How do we get back to the hotel if we do not want to wait for the bus?



ISS-90's youngest delegate lost mom and dad in the crowd at the Alvsjö exhibition center.



Above: The information desk was fully occupied all the time.



Tactical deliberations on the exhibition floor, before the evening's test runs.

TMOS demonstration during

The new product family TMOS was presented during Wednesday's technical visit to head office at Telefonplan. The different groups of delegates, about 40 persons in each group, got information on TMOS, tied in to the visit to the new information hall as well as general information about Ericsson Telecom.

The program for the technical visit to the main plant began with information about Ericsson Telecom from the president, Jan Stenberg.

Very interesting right now is the product family TMOS, which is sold in several countries, among others the American company Ameritech and to Mannesmann in West Germany. In addition, Italy and Finland have also placed orders.

Fredrik Ljungblom and Bo Ha-

Keen interest for Ericsson's new product family during the showings

gengren narrated and demonstrated during the technical visit what TMOS could eventually do. They spoke of the advantages of TMOS, such as speed and flexibility.

With TMOS, operators can work with a screen by simply giving commands direct traffic, or carry out different operations with a network.

For some time now, TMOS has belonged to the core products of Ericsson Telecom, and there is immense interest in the system.

TMOS has competitive advantages in that it can rapidly go in and acquire new services in the network.

The fact that interest is great stems, among other things, from the thoroughly thought out launching that began at the beginning of 1989. For the first time, Ericsson Telecom undertook a massive launching of a new product, and judging from the number of articles that appeared in the press the new system has surely aroused a lot of interest in the mass media.

In the launching, besides the press releases, and the articles, there were also sales brochures, technical brochures and overall packets.

Besides the finished material that was sent out, journalists were also invited to various seminars on TMOS.

The launching ran right up to the ISS-90 week.

Text: Helena Lidén
Photo: Kurt Johansson



Fredrik Ljungblom explained for the delegates about TMOS, during the technical visit to the main plant.

TMOS
- a new generation product from Ericsson

TMOS stands for Telecommunications Management and Operations Support and is an entirely new product family that has been developed and launched by Ericsson.

Three trends dominate the world market in telecommunications: the increasing complexity of tele networks, a growing demand for services and, with them, for quality from customers and increasing competition among network operators.

That means there is a need

for entirely new operations support systems, both to overcome the complexities and so that the public telecommunications companies could give their customers more services rapidly and, thereby, meet the competition.

TMOS is such a system. It belongs to a new generation of products in that not only can it help telecom administrations to introduce new service functions significantly faster but also not least in that it can meet international stand-

ards and can be easily complemented.

TMOS can also service non-Ericsson products.

TMOS is not only a system. Right now, there are five different applications for TMOS.

These are: NMAS (Network Management System). A system to oversee the network and the traffic that goes through it. Alarms, messages and data from the network are passed on to the operator in a readily under-

standable way, and the operator's commands are set in motion, thereby facilitating the return to the network.

SMAS (Service Management System) is one that allows network operators and customers to define and introduce intelligent network services. Services like 020 numbers and personal telephone numbers, and more, can be quickly defined and introduced.

Among other countries, SMAS has been sold to Ameri-

ISS-90



Dimitri Olofsson shows Technology CAD, which in a simulation of processes, topology and element (devices) allows builders to run full tests before going into production.



Fiber optic makes its entry into the switching system. Gunther Beckinger from Siemens and Richard Möller from Ericsson Components swap ideas on Optical Fiber Interconnect.

Ericsson Components displays its competence



Ericsson Components in Kista showed its competence in the area of integrated circuits for telecommunications systems. System builders and developers showed the latest techniques.

The new tele systems, here a Teradyne A520, demonstrate the possibilities for efficient construction test programs.

tech in the States, where it will come on stream in 1991.

The third application is FMAS (Facility Management System). FMAS works with the handling and control of digital cross connects, DCCs, and multiplexers in transport networks.

FMAS gives network operators the possibilities of meeting the growing demand for lease lines.

BMAS is the fourth application. This is designed for large advanced companies. It

gives the customer itself the possibility of activating new functions in the network and controlling the use of it.

The fifth and last application is CMAS (Cellular Management System), which is designed to maximize operational quality in the mobile telephone network. CMAS allows network operators to continuously feed and analyze the network and redistribute it in line with growth.

Helena Lidén

Even a delegate has to eat...

ISS-90 was not only a technological climax but also a culinary adventure of immeasurable dimensions. Delegates got to taste the best of Swedish cooking.



From the exhibition to Skansen - five evenings of good food. Finnish, Swedish, German and French hosts - they all offered lots of Swedish delicacies. The consumption was remarkable, so much so that on several occasions there was not enough for everyone.

PHOTO: Maria Petersson and Kurt Johansson



The fleet putsout to sea



The steamer whistles blow, the streamers flutter, the smoke lays heavily over Skeppsbron just before the royal castle in Stockholm. The faint throb of the steam machines can be heard - 22 boats plying the archipelago drawn up alongside each other facing the statue of Gustav III ready for shipping out. It was the first archipelago fleet to be mobilized.

Now everybody started to flow, close to 2,500 ISS-90 elegates, in order to get on board to take part in the first large company-arranged social event of the ISS-90 conference - the Siemens archipelago excursion to Vaxholm Castle on the evening of Tuesday, May 29. Many more wanted to go, but the tickets were taken up long since.

At 7 p.m. on the dot, the steam whistles blew and the first five boats set out to sea, with the SS *Blidösund* to the fore, closely followed by *Rex Solaris*, *Carl Mikael Bellman*, *Värmdö* and *Skärgården* - all decorated with birch twigs as if it were midsummer. At intervals of fifteen minutes an additional five more fleets of boats headed out. The English-speaking guides likened Stockholm to the Venice of the North

and soon we were on our way past the bays and Fjäderholmar through the "world's most beautiful archipelago." One can only thank Siemens for this extraordinary and pleasant way to sell Sweden.

Skipper's cap for all

The weather was ideal, with a brilliant sun and deep-blue sky with the hues that only a Scandinavian sky could have. It could have been a little warmer in the air. But then it was warm on board. Each boat had a Siemens captain and a hostess that took care of the guests in the best possible way. All the passengers got a skipper's cap and soon it was swarming with white caps on board the boats.

Trusty leader

I myself went with the flagship and, for the day, the press boat also, the SS *Blidösund* - an adventure in itself. It is the archipelago's last remaining coal-fired steamer, entirely in its original form from the time it was built in 1911, when she was launched the Eriksberg Mekaniska Verkstad's yard in Gothenburg. The skipper of the day was *Svante Gegen*, a well-known figure among steamer aficionados in Stockholm.

Of course, it's easy to fall in love with good old *Blidösund*! There were many throbbing hearts among the ISS delegates as they went around inspecting the well-



Here every language in the world is spoken. Dinner began with a herring dish of the finest Swedish choice.

polished steamer, which was permeated by a wonderful aroma of steamboat beef mixed with coal smoke. One could guess what was coming.

Siemens took the opportunity to demonstrate its new portable mobile phone for the NMT 450 system, the NT 41. On board each boat there were two sets with well-versed instructors who invited whoever wanted to call wherever in the world they wanted. It was an appreciated gesture and the telephones were in use all evening.

In the beautiful dining rooms, there were herring dishes of the finest Swedish choice. After that

came the obligatory and classic steamboat beef - in *Blidösund*'s case grilled directly on the spit.

"When do we come into port?" The question was directed to me from my neighbor at the table, *Darrel Bevan*, of Vidicom Division in the U.S. When he learned that it would take another three hours through a major part of the archipelago's 40,000 islands it became clear to Mr. Bevan what this unique part of Sweden had to offer.

Brass meeting

After exactly one and a half hours we reached the Vaxholm castle where a glow of a sun was just setting. The brass band Messing-

en met us with merry music in turn of the century style and delegates began to enter the renowned fortress.

Who laughs last...

Up at the castle's highest point, I met an elder gentleman who looked over the bay with the air of a commander. He turned out to be Dr. Engineer *Heinrich Armbrüster* from Siemens AG in Munich.

I asked him if he had heard the story of *Graf Moltke*, the famous German commander defeated the French in the French-German war of 1870-1871. He had not. The story goes: It is said that *Graf Moltke* laughed only twice in his lifetime, the first when his mother-in-law died, the second when he saw the castle in Vaxholm. Dr. Armbrüster laughed twice as hard when he heard this story, surely Swedish from the beginning.

Fiery greeting

When all the boats landed and shortly before the first one began the homeward journey to Stockholm, at about 9.30 p.m. the Siemens name was lit up in pyrotechnic script on the roof of the fortress. A magnificent ending to a wonderful program that went thoroughly in the spirit of Swedishness.

Thord Andersson

Photos: Thord Andersson and Maria Petersson



Lars Hanberg from Siemens, left, demonstrates the new NT 41 telephone for journalists Svante Nygren (Ny Teknik) and Kjell Ericsson (INS).



ISS delegates go on board the flagship SS *Blidösund*.



The Vaxholm fortress impressed with its beautiful setting, its canons and its history as well as warmth with coffee and punch.

Screen display, a new aspect

Future mobile communications in the form of the cordless telephone and the so-called personal phone, developed from today's mobile telephone system, were two interesting topics that were presented during the so-called "poster sessions" one afternoon at the Alvsjö exhibition center. They were presented in a simple manner and delegates had the chance to ask questions and discuss with the presentation panel.

Tuesday afternoon during the ISS-90 week was dedicated to some 25 companies, so-called poster sessions. These were held in one of the large exhibition halls. At the same time in 25 different places with simple screen walls. Visitors circulated among the display stands. Two sessions were given to mobile communications. One dealt with cordless business telephones (a business cordless PABX telephone system on 800 Mhz based on the DECT technology) and the other on the personal phone (the future of cellular telephony).

Here delegates had a chance to get background facts for Wednesday's technical visit to Kista, which would demonstrate future systems for mobile communications.

All presentations and discussions were conducted in English.

Cordless

At Screen 3, Ge Klein Wolterink



Ge Klein Wolterink from Ericsson in Holland had to answer many questions about the cordless office phone DCT 900.

(from Ericsson Paging Systems in Holland) spoke about the cordless phone, which is built on the so-called DECT standard. At Screen 23, diagonally across the floor, Jan Swerup (from Ericsson Radio's division for mobile telephone systems) spoke of the possible developments for mobile telephone systems.

Two paths to the same goal, personal phones that will replace all others. The phone that in a not too distant future (a few years) will function as a home phone, car phone, office phone, pocket phone etc.

At a distance, there was a gray mass of suit-clad gentlemen (almost exclusively men) who moved in a clump around the stands. But if you took your time and blended in with the audience, you could see that the interest and dedication were intense.

Competent gathering

It was a competent gathering of delegates with open minds that broadened their knowledge in:

- A Belgian broadband ATM experiment.
- A broadband optical multicast switch (Bell in the U.S.A.).

- Erlang – an experimental telephony programming language (Ellemtel).

- Information protection in the Swedish ISDN (Televerket and TeleData, Sweden).

- The architecture of a large capacity packet switch (Bell Canada and Televerket, Sweden) etc.

But just as many stood and discussed with each other. They made personal contacts at such exhibitions. People from different countries meet and exchange experiences.

The presentations, so-called

proceedings, could be found written and assembled in fat notebooks, which all the delegates got in a folder already on their first day.

Those who were well prepared could also ask the right questions and get answers directly from the experts that presented their field of knowledge.

The fact that both office phones and future mobile telephones aroused interest and that they could also answer so many questions should reassure Ericsson representatives.

Lars Cederquist

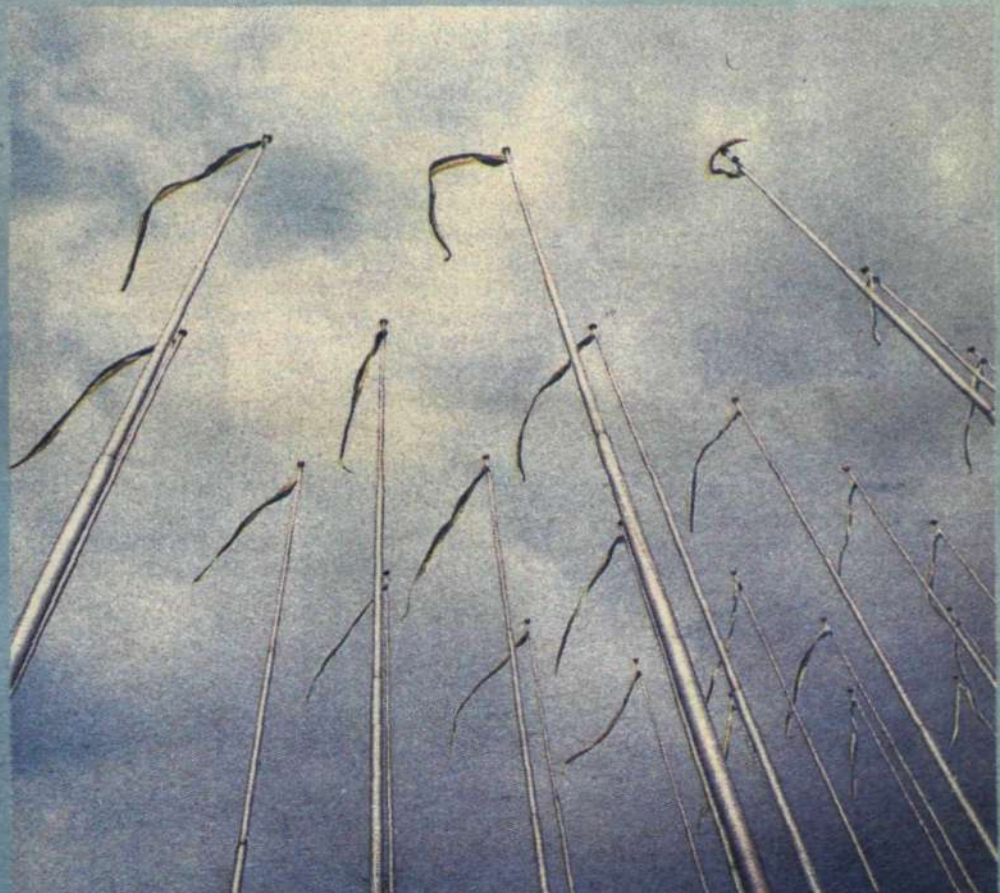
Pictures from ISS-90



An electronic information system was at the disposal of delegates.



Delegates from 86 countries got help in keeping track of the time at home.



Sweden stood out in the course of the ISS-90 days. The eyes of the entire telecommunications world were on us.

Success after 7 years' work

When the doors closed at the Alvsjö exhibition center after the last delegates left on Friday afternoon, the organizing committee could breathe easily. Seven years of intensive work with ISS-90 was just about over.

"It is with mixed feelings that I leave ISS-90 behind me," says Gustaf Douglas, one of Ericsson's representatives on the organizing committee and the original figure that took the initiative to hold the symposium in Stockholm this year.

Already back in 1983, a Swedish application to arrange ISS-90 was submitted to the ISS Ad Hoc Committee. Behind the application was a decision from Ericsson and Televerket to stand together as a guarantee for the arrangements. Ericsson put up 100,000 kronor to market Stockholm as the place for the 1990 symposium, money that was used for, among other things, a film about Stockholm and the Swedish Fair.

Maybe it was the merits of the film that led to the competing cities, London and Amsterdam, losing out to Stockholm.

In 1986, a definitive agreement was signed between Televerket, Ericsson and ISS, in which the Swedes agreed to cover any eventual losses of the symposium. Profits, if there were any, would be used for scientific purposes.

"Happily enough, today we can confirm that ISS-90 had a surplus of several millions - exactly how much we will know in the autumn when the tallying is clear," says Gustaf Douglas. The money will be put at the disposition of the Swedish Academy of Engineering Sciences.

Drew in sponsors

"Behind the excellent results is the fact that we very early on decided to bring in sponsors into the arrangements. There are several companies that came up with 'very essential support,'" says Gustaf, without going into details about the particular investments.

Of course, in addition both Televerket and Ericsson loaned out lots of qualified people during

the travel time and not least during the ISS-90 week.

ISS-90 was budgeted for 2,500 delegates, but there were considerably more than that. The end result was 3,551 delegates and 533 accompanying persons. At the previous ISS conference, which was held in Phoenix, U.S.A., there were 3,086 delegates - a record that has been easily outdistanced now.

"An even bigger success may be noted in the number of participating countries, here we have gone from 48 countries in Phoenix to 86 at ISS-90," Gustaf points out.

The next ISS will be held in Yokohama, Japan, in 1992. The organizing committee for this event had sent a 17-man delegation to Stockholm in order to learn from the Swedes. Also ISS-95, which will be held in Germany, has had contacts with the Swedish organizing committee. Gustaf Douglas and his colleagues, though sad that it's all over, are proud over the interest and joy regarding everything that was done to achieve a perfect event in Stockholm.



It is with a certain sadness that Gustaf Douglas, one of Ericsson's representatives in the organizing committee, leaves the work of ISS-90 behind him. It has been an intensive job with a very agreeable team, he says

FOUR VIEWS OF ISS-90

Karl-Heinz Rosenbrock, delegate from the Post and Telecommunications Ministry in West Germany.



"A very fascinating week, spiced with interesting information," says Karl-Heinz Rosenbrock of ISS-90.

On the question of what he will remember most, back home in Germany again, he answers:

"Naturally, the seminars were of high caliber, but also the Swedish hospitality."

He believes that so many delegates came to ISS-90 because Stockholm is such an attractive city. It was not the first time that he was at an International Switching Symposium, and he noted that the only place where there were as many delegates as at ISS-90 was only at the previous one in Phoenix, U.S.A.

He also praised ISS-90's social events of the evening.

"I think it is very noteworthy that various companies could sponsor the evening events in this way," he said.

Matthew Doar, student, Cambridge, England.

Matthew Doar is one of about 20 students who were invited to participate in ISS-90. He does not regret for a moment having come to Stockholm.

"I have really made new contacts, thanks

to ISS-90," he says. "It has been extremely useful for me."

Matthew actually got so much out of the week that he decided to take his two weeks off immediately after ISS-90 rather than go straight back to Cambridge.

"Some of the people I met here will come to Cambridge at some point and I would like to meet them again," he says.

For the few students who were invited, the seminar week cost 1,800 kronor, compared with 3,000 or 4,000 for the ordinary delegates.

"Unfortunately, the hotel room costs the same per night," says Matthew with a laugh, "but it's worth it."

Matthew is studying for a Ph.D. in computer science with specialization in data communications at Cambridge University, and he has learned a lot from the seminars.

Being a student at ISS has its advantages.

"As a student, you get in everywhere, although one shouldn't really do that. That means the various evening events. Moreover, a lot of walls come tumbling down during a week like this."

"Just think that a mere student can talk with the big names in the field," he says, a bit bewildered. "They show up, look at the name tag and see that you are a student and

then begin to chat, quite naturally.

"All the events during the week impressed me," he said. The only thing Matthew was unhappy about was the promised system to send mail by computer. It did not work at all. Instead he had to resort to the old tested way: paper and pen.

Birgitta Sten, secretary at Koncernstab Marknad and during ISS-90 "a problem solver."

Birgitta Sten regularly works as a secretary at Koncernstab Marknad. She played a key role during ISS-90, first at Arlanda, and then during the week at the Globe hotel and at the Stockholm exhibition center.

We met her at the exhibition where she herself described her role as an alert problem solver. She took care of delegates and helped them to find hotel rooms, to locate each other. She helped those who had lost belongings or their luggage.

"They were long tough days with many improvisations," says Birgitta. Our loan of a telephone was much appreciated, the HotLine type, which we put at the disposal of delegates. It was a welcome sight all the time.

"My HotLine became an international meeting place all week. I really had to use my knowledge of English, German, French and a little Greek."

Walter J. Gill, Network Equipment Technologies.

"It has been a very good week." So say both delegate Walter J. Gill from NET, Network Equipment Technologies, and his wife Jean, from the U.S., about ISS-90.

Walter J. Gill was at the lectures to learn more about what was going on in the field of telecommunications.

"The international impression of the week's seminars have been very positive and they were very useful.

His wife visited Stockholm for the first time and she was thrilled.

"I looked at glass, and bought a lot," she says.

Her husband found out how easy it is to buy glass. "Just write on a piece of paper and they send it home."

With a map in her hand, Jean also tried to take in a bit more of the city.

The evening activities during ISS-90 were also appreciated and Walter J. Gill also felt that Ericsson did a superb job with the evening at the Globe.

The collective opinion of Sweden and Stockholm was very positive.

"People are so friendly, and it is so wonderful that they all speak English, for I do not know a word of Swedish," says Jean, as she breaks into laughter. She would happily return.